

**ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR PERMITS PROGRAM**

TECHNICAL ANALYSIS REPORT

For Air Quality Control Minor Permit No. AQ0489MSS04

**CONOCOPHILLIPS ALASKA INC.
ALPINE CENTRAL PROCESSING FACILITY**

REVISE CONDITION FOR PILOT VALVE EXCURSIONS

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ABBREVIATIONS/ACRONYMS

AAC	Alaska Administrative Code
ACP	Alpine Central Processing Facility
ADEC	Alaska Department of Environmental Conservation
AS	Alaska Statutes
CFR	Code of Federal Regulations
CPAI	ConocoPhillips Alaska Inc.
CPF	Alpine Central Processing Facility
DF-1	Diesel Fuel No. 1
EPA	Environmental Protection Agency
NA	Not Applicable
ORL	Owner Requested Limit
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
SIC	Standard Industrial Classification

Units and Measures

gr./dscf	grains per dry standard cubic feet (1 pound = 7,000 grains)
dscf	dry standard cubic foot
gph	gallons per hour
kW	kiloWatts ¹
lbs	pounds
mmBtu	million British Thermal Units
ppm	parts per million
ppmv	parts per million by volume
tph	tons per hour
tpy	tons per year
wt%	weight percent

Pollutants

CO	Carbon Monoxide
H ₂ S	Hydrogen Sulfide
NO _x	Oxides of Nitrogen
NO ₂	Nitrogen Dioxide
NO	Nitric Oxide
PM-10	Particulate Matter with an aerodynamic diameter less than 10 microns
SO ₂	Sulfur Dioxide
VOC	Volatile Organic Compound

¹ kW refers to rated generator electrical output rather than engine output

1.0 Introduction

This Technical Analysis Report (TAR) provides the Alaska Department of Environmental Conservation's (Department's) basis for issuing Air Quality Control Minor Permit AQ0489MSS04 to ConocoPhillips Alaska Inc. (CPAI) for the Alpine Central Processing Facility (ACP). In this minor permit, the Department revises periodic Particulate Matter (PM) monitoring requirements for Gas turbine in condition 11 of Permit No. AQ0489MSS01.

2.0 Background

2.1 Stationary Source Description

Alpine Central Processing processes crude oil, gas, and water, and sent the oil by pipeline to the Trans Alaska Pipeline.

The ACP is classified as a Major Stationary Source under 40 CFR 52.21(b) (1) (i)(b) because it has the potential to emit more than 250 tons of one or more regulated air pollutant.

CPAI is currently operating ACP under Minor permit No. AQ0489MSS01, AQ0489MSS02, AQ0489MSS03

2.2 Project Description

Condition 11 of Minor Permit AQ0489MSS01 does not allow for brief pilot excursions even though condition 11.9 of Minor Permit AQ0489MSS01 allows brief pilot excursions to happen. The Solar control logic that CPAI uses, as a control measures is causing 10-15 second excursions even in normal conditions. CPAI is working with Solar to address issues with the control logic. CPAI Has made changes to the load changes, improving the control algorithm for the inlet guide valve

CPAI has now applied for a minor permit under 18 AAC 50.508(6) to **revise** Condition 11 of Permit AQ0489MSS01. CPAI has calculated emissions based on rich fuel and compares them with emissions during low emissions mode that would occur with the pilot valve at 100 percent open. CPAI estimated that NO_x would increase by 0.49 tpy. all other pollutants will remain unchanged and will not affect BACT. CPAI has address this issue before, in public comment #13 of Construction Permit No. 489CP10 dated September 17, 2004, however the Department did not take action to address this concern. The Department did take action to address other concerns in the comment and did not say anything to contradict the comment.

2.3 Department Findings

The Department's findings regarding this application are as follows:

1. A minor permit is required under 18 AAC 50.508(6) because CPAI is requesting changes to terms and conditions of a Title I permit.
2. In their application, CPAI requested that the Department revise Condition 11 of Permit AQ0489MSS01. The Department agrees with CPAI that the Condition 11 of Permit AQ0489MSS01 conflicts with Condition 11.9 of Permit AQ0489MSS01.

2.4 Requirements for all Minor Permits.

As described in 18 AAC 50.544(a), this minor permit identifies the stationary source, the project, the Permittee, and contact information.

The permit is required under 18 AAC 50.544(a) to contain the fee requirements of 18 AAC 50.400 – 18 AAC 50.499. This permit action causes an increase in NO_x of 0.49 tons per year; however, all other pollutants are unchanged. As the fee requirements already listed in the operating permit are unchanged, no fee requirement is listed in Permit AQ0489MSS04.

2.5 Requirements for a Minor Permit that Revises or Rescinds a Previous Title I Permit

As required in 18 AAC 50.544(i), this minor permit contains terms and conditions as necessary to ensure that the Permittee will construct and operate the stationary source in accordance with 18 AAC 50. In this minor permit, the Department revised Condition 11 of Permit No. AQ0489MSS01. Condition 11.9 of Permit AQ0489MSS01 already effectively allows this loophole by not requiring any action until after 48 hours, so this current change continues to ensure that the Permittee will operate the source in accordance with the chapter as described in this section.

3.0 Permit Administration

This revision to a Title I condition is a Clean Air Act Section 502(b) (10) change because it does not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, of compliance certification requirements.

40 C.F.R. 71.6(a)(13)(i) allows a Permittee to make section 502(b)(1) changes without a permit revision if the changes are not Title I modifications, and the changes do not exceed emission allowable under the permit. For the purpose of changes to Title V permits, lacking EPA guidance to the contrary, the Department considers Title I modifications to be PSD major modifications, and modifications under NSPS or under CAA Section 112. Therefore, the Title I permit change in this permit is not a “Title I modification” for this purpose.

As such, the Permittee may operate in accordance with the permit upon issuance.

That said, in their application, CPAI has requested that the Department administratively revise the Title V permit to incorporate this change. Therefore, the Department has followed necessary Title V permit processing procedures and intends to incorporate this revision into the Title V permit after EPA review.